

Soma among the Armenians

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[Footnotes](#)

[1] *Soma* was a god, a plant, and an intoxicating beverage. It is referenced in some 120 of 1028 verses of the Indian *Rig Veda* (mid second millenium B.C.). *Haoma* was its Iranian counterpart. Although the Iranian *Avesta* mentions *haoma* less frequently, there is little doubt that the substances were similar or identical. In both India and Iran, at some point the true identity of *soma/haoma* was forgotten, and substitutes for it were adopted. It has been suggested that abandonment of the divine entheogen and its replacement by surrogates occurred because the original substance was no longer available or was difficult to obtain once the proto Indo-Iranians left their "original homeland" and emigrated (1).

During the past two hundred years, scholars have tried with varying degrees of success to identify this mysterious plant which was at the base of early Indo-Iranian worship. As early as 1794, Sir William Jones suggested that *haoma* was "a species of mountain rue," or *Peganum harmala* L. (Arm. *spand*) (2). Other *soma* candidates in the 19th and early 20th centuries have included cannabis (Arm. *kanep*) and henbane (Arm. *aghueshbank*). All of these plants are native to the Armenian highlands, and all of them were used by the Armenians and their predecessors for medicinal and magico-religious purposes (3). If the divine elixir really was a single substance rather than a mixture, then, in our view, none of the above-mentioned nominees alone qualifies. The pharmacological effects of *Peganum harmala*, cannabis, or henbane, taken alone, simply do not match the Vedic and Iranian descriptions of the effects of *soma/haoma* (4). In the 1960s, R. Gordon Wasson proposed a new candidate, whose effects are more consistent with those mentioned in the Vedas. The present study will examine Wasson's thesis and look for supporting evidence in ancient Armenian legends and customs.

In *Soma Divine Mushroom of Immortality* (1968), Wasson argued that the intoxicating plant called *soma* in the *Rig Veda* should be identified with the red-capped psychoactive mushroom, *Amanita muscaria*. This mushroom, which contains the powerful hallucinogen muscimol, can cause elevated mood, euphoria, auditory and visual hallucinations, as well as feelings of increased strength and stamina. *Amanita muscaria* (called fly-agaric in English) is perhaps the most widely depicted mushroom in children's books, often stylized as a red-capped mushroom with white polka dots [[Images of the Amanita Muscaria Mushroom](#)]. Wasson's arguments revolved around certain poetic and elliptical statements in the *Rig Veda* which seem to indicate that this magical plant lacked roots, branches, flowers, seeds, or leaves, a fitting description of a mushroom (5). The god *Soma* was associated with the color red, the god of fire (Agni), and the bellowing bull (6). The plant *soma* is like a "red bull" (RV IX.97.13), but with a "dress of sheep" (RV IX. 70.7). It "creeps like a serpent out of its old skin" (RV IX.86.44).

In nature, this mushroom begins fruiting as a white "egg" enclosed in the membranous material of the universal veil; the stalk pushes up as it grows, and the distinctive orange-to-red cap appears from behind the veil. White flecks of the veil remain on the cap in patches like the "hide of a bull" in a "dress of sheep," or like a "serpent creeping out of its old skin." *Soma* is the bolt (*vajra*) of Indra (RV III.43.7; IV.18.13; IX. 77.1) and the mainstay or pillar of the sky (RV IX.2.5; IX.72.7).

[2] In the Vedas, *soma* was also an intoxicating liquid, pounded or pressed out of the plant using special pressing stones (RV IX.11.5-6; IX.109.17-18), filtered through wool, and presumably mixed with other

ingredients. In folklore throughout Eurasia, it was found high in the mountains and was associated with a magical bird, serpents and eggs; its sudden appearance after a storm, led to an association with thunder and lightning, since many early peoples believed that mushrooms appeared where lightning hit the ground (7). Curiously, the presence of urine in the myths Wasson examined was taken as one of the "markers" of the *Amanita* cult. Unlike many other hallucinogens, the active ingredients in *Amanita muscaria* pass unmetabolized through the kidneys of the ingester. As a result, that person's urine is as potent as the mushroom itself, a circumstance which led to the recycling of urine in those cultures which used *Amanita* for magico-religious purposes, and perhaps to the sanctity of urine in Indo-Iranian tradition (8).

In nature, this mushroom grows only in a mycorrhizal relationship with certain trees: aspen, beech, birch, fir, larch, oak, pine and several others. It has thus far resisted attempts to grow it in a laboratory. Besides humans, two other animals, the deer and the raven, are known to relish this mushroom. The raven's love of *Amanita muscaria* was noted in antiquity: in ancient Egypt the *Amanita muscaria* mushroom was called "Raven's bread" (9).

Wasson's identification of *soma* with the *Amanita muscaria* mushroom has not won universal acceptance. It was embraced by some, including the orientalist Harold Bailey, the linguist Roman Jakobson, and the mycologist Roger Heim, but others (including Wasson's co-author, the Sanskritist Wendy Doniger O'Flaherty) were not convinced. The latter remarked years later:

My own work, however, was leading me toward another sort of hypothesis entirely: it did not really matter what Soma was, since it was lost so early in history; what actually played so important a part in Vedic civilization was the *idea* of Soma. Indeed, my more recent collaborations with Brian K. Smith on the subject of substitutions in the Vedic sacrifice have inclined me in the direction of Smith's hypothesis that there may never have been an original Soma plant at all, and that *all* of Soma's "substitutes" (including, perhaps, the fly-agaric mushroom) were surrogates for a mythical plant that never existed save in the minds of the priests (10).

Wasson was challenged most recently by another collaborative work, *Haoma and Harmaline, The Botanical Identity of the Indo-Iranian Sacred Hallucinogen "Soma" and its Legacy in Religion, Language, and Middle Eastern Folklore*, by David S. Flattery and Martin Schwartz, Near Eastern Studies (volume 21) (Los Angeles, 1989). The authors described their study as a "vindication of Jones's original proposition" (of 1794) (11) and argued that it was not a mushroom which was the Indian *soma* and the Iranian *haoma* but the plant *Peganum harmala*, especially the seeds, containing the hallucinogen harmaline. The work of Flattery and Schwartz is a fascinating, scholarly study which, without a doubt, has raised the level of ethnobotanical research. Nonetheless, it is doubtful that either author actually experimented with *Peganum harmala*. Had they done so, they would have concluded that by itself *Peganum harmala* could not have merited the encomiums lavished on *soma/haoma* in the Vedas (12). It is, however, noteworthy that to this day, *Peganum harmala* is used as a "potentiator" for psychoactive mushrooms. It is quite likely that ancient Iranians had also discovered this quality of *Peganum harmala*, and that their *haoma* preparations exploited it.

[3] Wasson's greatest contribution, in our view, was not his identification of *soma* with the *Amanita muscaria* mushroom. Rather, it was the attention he drew to the role of fungi in humankind's earliest history. In Wasson's view, religion had its birth in the awe-inspiring effects of first accidental then deliberate ingestion of these hallucinogens. Why was it that certain trees were revered by our early ancestors? Wasson suggested that in many cases the trees were sacred because of the hallucinogenic mushrooms that grew at their bases, or the fungi which grew on their trunks (13). Such trunk fungi, known as polyphores, were used since remote antiquity for their medicinal qualities and as tinder ("spunk," "punk," Arm. *abet'*) (14).

Wasson is considered the father of a new discipline, ethnomycology, the study of humankind and mushrooms, in particular psychoactive mushrooms. A number of scholars, including the botanists William Emboden and

Richard Schultes and the classicist Carl Ruck, independently and at Wasson's urging, began looking for mushroom lore in Greek and Eastern mythology. The chemist Albert Hoffman (who synthesized LSD from psychoactive mushrooms found in Mexico), was another member of this group. During the 1970s and 1980s, several fascinating studies emerged as a result of their collaboration, including *The Road to Eleusis* (1978) and *Persephone's Quest* (1986) (15). Emboden's *Narcotic Plants* (1980) and Schultes' and Hoffman's *Plants of the Gods* (Rochester, Vermont, 1992) are other important works on this subject.

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While thus far there have been no studies of the ethnobotany of the Armenian highlands, there are, nonetheless, some rich secondary materials for such a study. Among them are Ghevond Alishan's *Haybusak [Armenian Botany]* (1895), the same author's *Hin hawatk' kam het'anosakan kronk' Hayots' [The Ancient Faith or Pagan Religion of the Armenians]* (1910), Joseph Karst's *Mythologie armeno-caucasienne et hetito-asianique* (1948), Karapet Gabikian's *Hay Busashxar* (1912) and T. Awdalbegyan's *Avandapatum* (1969). Mardiros Ananikian's treatise *Armenian Mythology*, in vol. 7 of *Mythology of All Races* (1964; repr. of 1925 ed.), and James Russell's *Zoroastrianism in Armenia* (1987) also contain important material on sacred plants. While all these works list the sacred plants revered among the Armenians, and provide valuable legends about them, none of them examines the possible reasons for these plants' original appeal (16). Similarly, recent works on early Armenian medicine do not focus on entheogens as such, but rather on the medicinal value of the plants (17). In any case, mushrooms and/or tree fungi do not appear in any of these lists.

Armenian primary sources also say little about mushrooms (Armenian *sunk*) (18). The 5th-century Eznik, who mentions cannabis, mandrake, hemlock, and spurge and was well aware of their effects (19) uses the word mushroom only once, without commentary (20). The 13th-century *Girk' Vastakots' [Book of Labors]* has a short chapter (#272) on growing mushrooms, which indicates that the Armenians were familiar with mushroom cultivation. Alishan's entries in *Haybusak* for agaric are *T'npi* (#796, p. 191), *K'ujulay/K'uch'ula* (#3216, p. 648) and *Gharicon* (#1813, p. 392). *T'npi* and *K'ujulay* he regards as *Amanita*. *Gharicon* was perhaps *Fomitopsis officinalis*, the agaric tree fungus mentioned by Pliny and used in numerous medicinal preparations (21). Agaric and *Amanita* were familiar to the Armenian physicians Mxit'ar Herats'i (12th century) and Amirdovlet (15th century) who mentioned them in remedies for a variety of ailments (22). Agaric is also mentioned as a valuable commodity of trade in the 13th century *Law Code* of Mxit'ar Gosh (23).

[4] Though the Armenian literary histories say little about mushrooms, there is, nonetheless, evidence about the importance of certain trees that are known hosts to *Amanita muscaria*, and other medicinal fungi. For example, the Urartian king Rusa (8th cent. B.C.) planted a grove of white poplars, and divination by the rustling of the poplars' leaves was a feature of later pre-Christian Armenia. The cypress, juniper, oak, pine, and fir were other venerated trees. The Orontid king Eruand in the fourth century B.C. planted a forest of firs near the city of Bagaran. The Arsacid king Xosrov II Kotak (A.D. 330-38) planted a grove of oaks called the "Palace Grove (*Tachar mayri*) and a grove of firs called *Xosrovakert*. A fourth-century Syrian monk, Mar Aha, commented on tree-worship among the Armenians (24). The 12th-century Catholicos, Nerses Shnorhali, railed against reverence paid to the aspen, poplar, and willow by the *Arewardik'* ("Children of the Sun"), an ancient group which also worshipped certain heliotropic plants. Indeed, as late as 1915 in central and eastern Asia Minor, the Armenian population held certain trees in great esteem, especially those near a spring, and they decorated their branches with written prayers (25).

But what of much earlier times, the mid-second millenium before our era, when the Vedas were being composed? Archaeology, a major potential source, must await more propitious times (26). Currently, our only sources are fragments of early myths incorporated into much later Armenian writings. We shall now examine

several such myths in the light of the ethnobotanical studies of Wasson and his colleagues.

Vahagn

The Armenian god Vahagn has a number of the markers of *soma* identified by Wasson and his associates. Vahagn became the preeminent weather god: a god of thunder, and lightning. He is associated with the Vedic god of fire, Agni, and the Greek gods Prometheus and Haephestus. Prometheus' gift of "fire" to humanity, delivered through a stalk of fennel, has much in common with Vahagn's remarkable birth. Carl Ruck was to equate Prometheus' "fire" with the fly-agaric mushroom (27). In our opinion, the legend of the birth of Vahagn, which Ananikian calls "an independent tradition from the original homeland of the Indo-Iranians" (28) presents an even clearer image: Vahagn's red head with suns for eyes is a poetic reflection of the red *Amanita* mushroom's cap, dotted with white flecks of the universal veil:

The sky was in labour, the earth was in labour,
The purple sea also was in labour.
In the sea was a red reed, also in labour.
Out of the stalk of the reed smoke emerged.
Out of the stalk of the reed flame emerged,
And running out of the flame was a *xarteash* ("fair, light, flaxen") lad.
He had hair of fire.
He had a beard of flame
And his eyes were suns (29).

There is a curious epithet of this god, *vishapakagh* ("vishap"-reaper or "vishap"-gatherer/harvester). Although this epithet had come to mean "vishap" ("dragon") killer/slayer in medieval Armenian literature, even as late as the 5th century, "vishap" meant more than a "dragon" (30). One derivation of "vishap" [5] is from Persian "having poisonous saliva" (31). Could the *vishaps* and possibly the enigmatic *vishap*-stones found in various places on the Armenian highlands originally have been mushroom-related? The peculiar method of "harvesting" the *vishaps* is suggestive: Vahagn is said to wait until the small ones have grown and are ready—more like a farmer gathering a crop than someone killing "dragons." The peculiar explanation of "*vishap hanel*" ("to remove a *vishap*") also seems connected with a harvest: the "*vishap*" is "drawn up" or "pulled up" out of a wet place (32) very much like a mushroom. Ananikian observes: "this process was always accompanied by thunder, lightning, and heavy showers" (33). Certain Hurrian and Phrygian myths have similar unusual features, perhaps reminiscent of a mushroom harvest (34).

The God Mithra and the Heroes of *David of Sasun*

Mithra (Arm. Mher) was another Indo-Iranian deity once popular among the Armenians. In the *Rig Veda* (IX.108.16), Mitra is "pleased by *soma*." In the *Avesta*, *haoma* is offered to Mithra (Yasht X.6). Mithra's weapon is the mace or thunderbolt (*vazra*), similar to Indra's bolt (*vajra*). The raven, an *Amanita* marker, was sacred to Mithra as it was to Verethragna, Vahagn's Iranian cousin (35). According to Greek legend, Mithra was born in Armenia by the banks of the Arax river where, presumably, his killing of the bull of plenty took place (36). Ethnobotanists see several features of the *soma* cult in this god's attributes. Called the "Capped

One", he is said to have been born from a rock or egg already wearing a cap, often painted red (37). His secret cult, which had strong astrological/alchemical/eschatological components, involved a sacred meal and meetings in caves and/or subterranean chambers. Apparently, Mithra originally was a weather god in Armenia, although this attribute was later acquired by his triumphant competitor, Vahagn (38). According to Strabo, in Achaemenid times, the satrap of Armenia "used to send to the Persian king twenty thousand foals every year at the time of the Mithracina" (39). This latter was a festival to Mithra when "it was the privilege of the Great King of Persia to become drunk" (with *haoma*?) (40). According to Pliny the Elder, in 66 A.D., when the Armenian king Trdat I travelled to Rome to receive coronation from the emperor Nero, he may have initiated Nero into certain "Magian" (?Mithraic) rites, involving a secret sacrament (41).

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The medieval Armenian epic *David of Sasun*, which is full of Mithraic imagery, contains several interesting allusions and references to *soma*-drinking, and mushrooms. In the First Cycle, Dzovinar ("Sea-born," "Bolt of lightning") (42) drinks from a Milk Fountain of Immortality on Ascension Day, a day sacred to plants. She conceived from this and bore the twins Sanasar and Baghdasar, one large, one small, who are called "sea-born" and "fiery beings" (43). When grown, the twins resolve to build their fortress, Sasun, at the source of magic water, since:

The man who drinks at its source
Will become invincible;
No one will be able to down him (44).

Later, Sanasar descends into an enchanted underwater kingdom, while his brother Baghdasar falls into a trance by the shore of the lake (45). Sanasar himself sleeps and has a prophetic dream telling him the location of the Lightning Sword and the magic, flying, marine horse, Kourkig. [6] The dream also foretold:

You will bathe in the palace pool;
And you will grow, gather strength and courage.
Your strength will grow sevenfold,
And seven will grow sevenfold;
You will attain your heart's desire (46).

Sanasar found and donned the battle gear. Then he:

Went to the palace pool and bathed,
Drank the water of the fountain and fell asleep.
He slept for a short while; attained the grace of God;
He grew, gathered strength, courage,
And became a fiery being (47).

Like a mushroom, Sanasar had grown so large so fast that his brother did not recognize him, when he emerged from the magic lake (48). In a number of Sanasar's subsequent travels, he is drinking, harvesting, or pressing *soma*: he had to pass a test of strength involving drinking huge amounts of "milk" (49), he retrieved a fiery golden "apple," (50) snatched a "gem" from the mouth of a dragon (51), and, using special stones, slew a dragon blocking a spring of water (52). Brother Baghdasar is described by his mother as "*dzurh*" ("bent," "crooked") a term also used to describe the hero of the Third Cycle, David, after he has eaten wild mushrooms (see below), and several other of the epic's heroes when they demonstrate "insane" behavior (53).

In the Second Cycle, Sanasar's son, *Medz* (Big) Mher also grew prodigiously:

At seven years of age
Mher grew to be seven stories tall (54).

Before acquiring the magic horse and the other enchanted symbols of power and civilization, Mher was a wildman who chased and caught game on foot (55), often killing his prey by hand. He killed an ox with his Lightning Sword (56), as the god Mithra had killed the bull. Medz Mher is the only hero of Sasun to conclude a treaty (Iran. *mithra* "treaty") with his enemy, and dies because of a broken oath (57).

In the Third Cycle, Mher's son, David, actually eats wild mushrooms and becomes disoriented:

What was David doing?
He was eating leaves that he gathered,
Roots that he dug up in the fields, and
Mushrooms that he picked from the hillside (58).

...

On his way to Sassoun, to satisfy his hunger,
David had eaten grass and anything he had found.
Because of this he had become a bit foolhardy.
His mind was in a daze (59).

[7] By the time he reached Sasun, "He did not know where he was; He was bewildered..Kept walking in a daze" (60). After this, David is able to communicate with animals (61). He does not recognize the difference between livestock and wild animals (62), and continues to have lapses when he "does not understand" (63) the ways of civilized folk. Like his forebears, David, too, drank the magic potion. At the insistence of his horse, Kourkig, he drank from Mher's Milk Fountain:

He heard Kourkig's voice saying:
—This is your father's *Gatnaghbiur* [Milk Fountain].
Dismount, drink its water
And put a little of it on my ribs.
David dismounted, kissed Kourkig on the forehead,
Put a little water on his ribs,
And let him free to graze in the grass.
Then he drank the water of the spring,
Lay down, slept, and had a rest
While the horse stood against the sun and shaded him.

...

David awoke. He found that he had gained strength.
His father's garments would hardly fit him (64).

As mushroom cultivators know, direct sunlight destroys the potency of mushrooms, inhibits fruiting, and accelerates decay. Keeping the sun off *Pokr* (Small) Mher (David's son), the last of the line, is a curious concern in the epic's Fourth Cycle. His uncles, to protect him, "had taken Mher behind seven doors, Keeping him under guard" (65). His bride-to-be, Kohar, has a similar concern:

The following morning
Kohar Khanom looked out of her window
And saw Mher asleep in a tent
With his legs stretched out uncovered.
Kohar pitied him and thought to herself:
—Mher will get sunstroke.

She put on a crimson suit, girded her weapons,
Mounted her chestnut stallion, rode out to Mher's tent,
And said:
—Mher, the sun is striking you.
—What can I do? said Mher, the tent is too small.
—The tent is not small, said Kohar, it is big,
But you are an *Aznahour*.
Mher said:—Let me sleep...(66).

After testing Mher's strength in combat, Kohar said:

—Mher, you are worthy to become Kohar's husband,
But I say again, be careful,
Don't let the sun strike you.
She went, sent another tent with a servant;
—Pitch it to cover Mher's feet, she had said (67).

[8] This epic ends on an eschatological note. Mher knew that his time on earth was ending when the ground, literally, cannot support his weight. He and his horse start to sink into the earth. He visits his parents' tombs and each of them in turn tells him:

You have roamed the world enough.
You have roamed the world enough...
Akravou Kar [Raven's Rock] is your haven,
Go to *Akravou Kar* (68).

Mher went to Raven's Rock near Lake Van, split the rock with his Lightning Sword, and he and his horse went into the cave. The rock came together and closed behind them (69). Twice a year, on the magic days of Transfiguration (*Vardavarh*) and Ascension Day (*Hambartzoum*) the cave door opens and Mher, holding the Wheel of the Zodiac and attended by the faithful Raven, emerges to test the ground. Villagers claimed that the water dripping from the rock was the urine of Mher's magic horse, Kourkig (70).

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Soma-like ceremonies continued to be enacted by the Armenian population of Asia Minor until the genocide of 1915-1923. On Ascension Day, the holiday of the Mother of Flowers, and sometimes on the Feast of the Transfiguration the people would eat a pudding containing milk, called *kat'napur*. On an evening preceding the festival itself, village maidens would spend the evening collecting various plants:

...at an unknown and mystic hour of the night which precedes Ascension silence envelops all nature. Heaven comes nearer. All the springs and streams cease to flow. Then the flowers and shrubs, the hills and stones, begin to salute and address one another, and each one declares its specific virtue. The King Serpent who lives in his own tail learns that night the language of the flowers. If anyone is aware of that hour, he can change everything into gold by dipping it into water and expressing his wish in the name of God. Some report also that the springs and rivers flow with gold, which can be secured only at the right moment. On Ascension Day the people try to find out what kind of luck is awaiting them during the years, by means of books that tell fortune, or objects deposited on the previous day in a basin of water along with herbs and flowers. A veil covers these things which have been exposed to the gaze of the stars during the mystic night, and a young virgin draws them out one by one while verses divining the future are being recited (71).

The image of the Serpent "who lives in his own tail" suggests the presence of the *Amanita muscaria* mushroom; however, there is no mention of the water with herbs and flowers being consumed. Ancient Armenian *soma* ceremonies may have been similar to the old Indian and Iranian ceremonies (whose characteristics are unknown), but the sacred entheogens probably differed, based on their availability.

Conclusions

[9] The material presented in this study suggests that in remote antiquity the populations of the Armenian highlands, like the proto-Iranians and proto-Indians, used the *Amanita muscaria* mushroom for religious intoxication. The Iranians and Indians, at some point in the distant past, discontinued the practise. Ethnobotanists have suggested that the replacement of the original *soma* by surrogates among the Iranians and Indians was due to the difficulty of obtaining the entheogen, or its complete unavailability in their new settlements. Such was not the case in eastern Asia Minor and the Caucasus. The presence there of virtually all known arboreal hosts of *Amanita muscaria* has guaranteed its continued availability to the resident populations from earliest times to the present. While the proto-Armenian shaman-priests, like their Iranian and Indian cousins, may have discontinued *soma* use in their "official" religious practises, this may not have been the case among the common folk. The myths, tales, and customs reviewed above strongly suggest this.

The myth of the birth of the god Vahagn, Armenia's remembrance of the birth of the god Soma, seems to belong to the second-early first millenium B.C., perhaps an "independent tradition from the original homeland of the Indo-Aryans" as Ananikian put it (72). Neither Indian nor Iranian sources has preserved a birth legend for the god Soma, though the Armenian tradition has. The birth legends and gestes of the god Mithra are also replete with *Amanita* imagery. The presence of a popular Mithra cult on the Armenian highlands through the early centuries of our era, with secret rites and a mysterious "sacrament" suggests that the imagery is not simply evocative archaising.

Yet by the 5th century A.D. the meaning of the story of Vahagn's birth and of the *vishap*-harvest was no longer understood by Armenia's *clerical* writers. One suspects that members of the numerous pagan and Christian cults and sects which thrived across the highlands may have understood things differently and may have made use of the abundant ethnobotanicals readily available to them, including the *Amanita muscaria* mushroom, for magico-religious and sexual purposes (73). A surviving Armenian magical text also suggests this (74).

The 9-10th century epic, *David of Sasun*, not only contains the classical markers of *Amanita* also found in the descriptions of Vahagn and Mithra, but has at least one figure, David, the central hero, ingesting wild mushrooms, and feeling their effects. Mushroom and *soma* imagery is striking and systematic in all cycles of the epic. The society which produced this masterpiece knew about the *Amanita* mushroom firsthand.

Unlike the Iranian and Indian societies which abandoned *Amanita*, Armenian societies, apparently, held it dear; though it is in folk culture rather than in the world of the priests and literary histories that this is reflected. Elements of the *soma* ceremony itself survived among the Armenian population of central and eastern Asia Minor until the second decade of the twentieth century. The continuing availability of the red-capped mushroom across the Armenian highlands and in the Caucasus suggests that modern residents there also may have some tales to tell, if anthropologists will listen.

Footnotes

1. For the history of the search for *soma/haoma* and for additional bibliography see: R. G. Wasson, *Soma Divine Mushroom of Immortality* (New York, 1968) hereafter SOMA and his articles "The Divine Mushroom of Immortality" in *Flesh of the Gods*, Peter T. Furst, ed. (Prospect Heights, Illinois, 1990; repr. of 1972) pp. 185-200, and "What Was the Soma of the Aryans?" pp. 201-213 in the same book; *Haoma and Harmaline, The Botanical Identity of the Indo-Iranian Sacred Hallucinogen "Soma" and its Legacy in Religion, Language, and Middle Eastern Folklore*, by David S. Flattery and Martin Schwartz, Near Eastern Studies (volume 21) (Los Angeles, 1989), hereafter HAOMA; R. E. Schultes and Siri von Reis, ed., *Ethnobotany, Evolution of a Discipline* (Portland, 1997).

2. HAOMA p. 3. On *spand*, see Alishan, *Haybusak [Armenian Botany]* (Venice, 1895) (#2815, p. 578) hereafter Alishan; Karapet Gabikian, *Hay Busashxar* (1912; published Jerusalem, 1968) (#1311, p. 176) hereafter Gabikian under *shanp'in*. Joseph Karst, *Mythologie armeno-caucasienne et hetito-asianique* (Strasbourg, 1948), pp. 172-174 hereafter Karst, saw *haoma* in Armenian *hmay* ("augur") usually plural *hmayk'* and connected it with "l'arien Soma." One of the uses of *spand* among the Armenians was as an amulet or talisman to ward off evil (Gabikian, p. 176). *Hmayeak* ("talisman, amulet, phylactery"), which was also a popular name among 5th-century Armenian lords, has the same root.

3. On the various candidates, see HAOMA pp. 117-140; SOMA pp.100-147; William Emboden, *Narcotic Plants* (New York, 1979) pp. 54, 58-59. In 1931 Sir Auriel Stein provided some unintended humor by suggesting that the divine entheogen was wild rhubarb, which contains no known psychoactive substances. The proposal had been made earlier by Albert Regel in 1884. According to Stein, it was from a fermented wine made from the stalks of rhubarb and perhaps mixed with milk "which alone could endow a juice like that obtained from the rhubarb with the exhilarating and exciting effect so clearly indicated in the Vedic hymns," SOMA pp. 132-133.

4. The Sanskritist Wendy Doniger O'Flaherty describes what *soma* brings in the *Rig Veda*: "a sense of immense personal power (10.119, particularly valuable in the god Indra), intimations of immortality (9.113), the assurance of immortality (8.48), and the hallucinations of trance (10.136)," from *The Rig Veda an Anthology* translated and annotated by Wendy Doniger O'Flaherty (New York, 1981) p. 119.

As regards *haoma*, as David Flattery himself noted: "The effects actually experienced from a preparation of harmel were well known in Middle Eastern lore: as reported in early Islamic *materia medica* they are chiefly vomiting, sleep, intoxication, and an inclination toward coitus," HAOMA, p. 59. The following extracts from Flattery's study further support the view that *haoma* intoxication involved sleeping, and demonstrate the importance of pharmacologically induced visions in early Iranian religion:

The most explicit and detailed Iranian account of intoxication for religious purposes is the *Arda Wiraz Namag* [RB: The extant text is 9th century A.D., but is believed to have originated in the 3rd century]. The prologue (Chapters 1-3) of this Pahlavi text says that in order to dispel doubts about the claims of the Iranian priests to religious knowledge, Wiraz, having been selected as the most righteous of men, is given a drug before a public assembly, whereupon, lying tranquilly before the people, he has a vision of the fate of souls after death, which he afterwards dictates to a scribe. This prologue demonstrates the belief that pharmacologically induced visions were the means to religious

knowledge and that they were at the basis of the religion that the Magi claimed to have received from Zoroaster. It has previously been supposed that the event described in this text was outside the tradition of the sauma ceremonies; its possible relevance to the question of sauma has therefore never been explored. HAOMA, p.14.

...In this account the drink causes Wishtasp to see into *menog* existence and to become *stard* (or *stird*). The parallel account in *Pahlavi Rivayat* 140.6-10 relates: "When [Wishtasp] drank, he became *stard* immediately, and they led his soul to paradise and showed him the value of accepting the Religion. When he emerged from *stard*-ness he called for Zoroaster... Etymologically *stard* or *stird* means "spread out, sprawled." HAOMA, p. 19.

Fundamental to ancient Iranian religion was a belief in two existences, the material, tangible, visible existence...and the intangible, invisible, spirit existence..Middle Persian *menog*, as was glimpsed by Wiraz and Wishtasp by means of sauma...All material things and creatures exist simultaneously in spirit form. These spirit forms include the double or *frawahr* (Avestan *fravasi*-) of each person, living, dead and unborn. The overall appearance of this intangible, *menog*, world may in many respects resemble the material world but in addition to the forms of all past, present, and future creatures of Ohrmazd, it encompasses the pandemonium generated by the Evil Spirit. HAOMA, p. 19.

The consumption of sauma may have been the only means recognized in Iranian religion of seeing into *menog* existence before death...and is the means used by Ohrmazd when he wishes to make the *menog* existence visible to living persons. In ancient Iranian religion there is little evidence of concern with meditative practices which might foster development of alternative, nonpharmacological means to such vision. In Iran, vision into the spirit world was not thought to come about simply by divine grace nor as a reward for saintliness. From the apparent role of sauma in initiation rites, experience of the effects of sauma, which is to say vision of *menog* existence, must have at one time been required of all priests (or the shamans antecedent to them). Since sauma was the means by which Ohrmazd brought such vision to Zoroaster's champion, Wishtasp, there is no reason to doubt that sauma would also have been the means whereby Zoroaster (who as a *zaotar* consumed sauma in Yasna rites) also saw into *menog* existence and drew from it his knowledge of Ohrmazd and his revelation. HAOMA, p.20.

To summarize, the three Pahlavi accounts are consistent in showing that sauma brought about a condition outwardly resembling sleep (i.e., *stard*) in which targeted visions of what is believed to be a spirit existence were seen. Essentially consistent with these accounts is a passage found in two stone inscriptions written in Fars about 300 A.D. by Kirdir, the founder of the Sasanian Zoroastrian ecclesiastical establishment...Kirdir's inscription asserts in this passage, as a basis of his claim to religious authority, that his spirit double visited the other world and was shown heaven and hell. The account thus parallels the *Arda Wiraz Namag* in reaffirming the reliance placed on a vision of *menog* existence as the means to religious truth. HAOMA, p. 23

5. SOMA, pp. 18-21.

6. SOMA, pp. 35-60.

7. SOMA, pp. 172-203.

8. SOMA, pp. 25-34, 52-58, 73-76, 160-162, 249-250. It is noteworthy that the classical Armenian *mzem* "to urinate" also means: "to press, to extract by pressing or squeezing, to squeeze out, to express, to filter, to

distill," M. Bedrossian, *Nor barhgirk' hay-angliaren* (Venice, 1879; repr. Beirut, 1973) p. 470.

9. C. Ratsch, *Dictionary of Sacred and Magical Plants* (London, 1992) p. 83; *Amanita* eating by ravens is also mentioned in Alishan's *Haybusak* #3216, p. 648 under *K'ujulay/K'uch'ula*). On reindeer and *Amanita*, see SOMA 75-76, 161-162.

10. Wendy Doniger, "'Somatic' Memories of R. Gordon Wasson" in *The Sacred Mushroom Seeker, Tributes to R. Gordon Wasson*, T. J. Reidlinger, ed. (Rochester, Vermont, 1990) p. 58.

11. HAOMA, p. 3.

12. See note 4 above.

13. SOMA pp. 214-215, 218-220. Wasson suggested that the forbidden fruit of the Garden of Eden, was not an apple, but the red *Amanita* cap, SOMA pp. 178-180, 220-222.

14. *Abet'* is a general Armenian term for tinder, and was found on aging oak, juniper and willow, Gabikian, p. 11. See also Sir James Frazer, *The New Golden Bough* (New York, 1961) pp. 42-49, 347-349.

15. In *The Road to Eleusis* it was argued that the sacramental drink used in the Eleusinian mysteries contained ergotized rye. W. S. Shelley, in *The Elixir: an Alchemical Study of the Ergot Mushrooms* (Notre Dame, Indiana, 1995), advanced ergot (*claviceps purpurea*, Arm. *karmruk*) (a hard-bodied fungus that commonly infects grains) as a candidate for *soma*. Ergot contains lysergic acid amide, precursor to the synthetic hallucinogen LSD (D-lysergic acid diethylamide-25).

Persephone's Quest contains important chapters by Carl A. P. Ruck on *soma* in the ancient Greek world. Also see his chapter, "[Gods and Plants in the Classical World](#)," pp. 131-143 in *Ethnobotany, Evolution of a Discipline*.

T. McKenna, in *Food of the Gods* (New York, 1992) pp. 108-120, suggested that *soma* was another psychoactive mushroom, *Stropharia cubensis*, which contains the hallucinogen psilocybin. This mushroom is known from many parts of the world, including eastern Asia Minor, the Caucasus, northern Iran and southern India (see map in P. Stamets, *Psilocybin Mushrooms of the World* (Berkeley, 1996) p. 64). Unlike *Amanita muscaria*, which is wood-loving, *Stropharia cubensis* is dung-loving. McKenna suggested that this mushroom's association with cow dung may have led to the sanctity of cattle in Indian tradition.

16. On the sacred plants, see M. Ananikian, "Armenian Mythology" in *Mythology of All Races* vol. 7 (1964, repr of 1925 ed.), pp. 62-63, hereafter Ananikian; James Russell, *Zoroastrianism in Armenia* (Cambridge, MA., 1987), hereafter Russell, pp. 375-390; Ghevond Alishan, *Hin hawatk' kam het'anosakan kronk' Hayots'* [*The Ancient Faith or Pagan Religion of the Armenians*] (Venice, 1910), pp. 70-79; Joseph Karst *Mythologie armeno-caucasienne et hetito-asianique* (Strassbourg, 1948), pp. 157-67; Manuk Abeghyan, *Erker [Works]*, vol. 7 (Erevan, 1975), pp. 51-58; Aram Ghanalanyan, *Avandapatum* (Erevan, 1969), pp. 112-120.

Among the sacred plants were: *bryonia alba* (*loshtak*), a pain-killer, *nigella sativa* L., a stimulant and excitant, and *betonica officinalis*, a powerful tranquilizer. Campion and gentian are also mentioned in such lists. Vardanyan suggests that the reverence shown to these plants was due to their curative properties, and indeed, all of them were used in medicinal remedies. S. Vardanyan, "Medicine in Armenia," p. 186 in *The Diffusion of Greco-Roman Medicine into the Middle East and the Caucasus*, J.A.C. Greppin et al.ed. (Delmar, N.Y., 1999).

There has been some debate about whether *loshtak* also referred to mandrake (Arm. *mardatak*, *manragor*), one of the ancient world's most powerful hallucinogens, used in witchcraft and magic from Europe to India.

Gabikian claims that mandrake and *bryonia alba* were confused in the popular mind because of their similar human-like roots and effects (Gabikian, p. 77), (Alishan, #950, #1979).

In addition to the "official" sacred plants, it seems clear from the anecdotal evidence in Alishan, that Armenians were well aware of the numerous ethnobotanicals growing in their midst, and made use of them. Among them are: *Foeniculum vulgare* (Fennel) Arm. *rhzian*, *rhazian* (Alishan, #273, #2668, #2693); *Artemisia* (Mugwort; Absinthium) Arm. *hambardzum*, *bardzmaneak*, (Alishan, #321, #501, #1615); *Lactuca quercina* L. (Wild Lettuce), Arm. *hazar vayri* (Alishan, #1576); *Cannabis* (Hemp), Arm. *kanep'* (Alishan, #1296); *Veratrum album* L. (Hellebore), Arm. *jok'*, *koch vrats'i*, (Alishan #133, #901, #1462, #2638); *Nymphaea caerulea* Sav. (Sacred Lily of the Nile), Arm. *harsnamatn* (Alishan #285, #940, #1456, #1655, #1785, #2205, #2214); *Papaver somniferum* (Opium Poppy), Arm. *xashxash*, *mekon* (Alishan, #1000, #1001, #1003, #1656); *Solanum nigrum* L. (Black Nightshade), Arm. *aghuesu-dzuk'*, *kotruk*, *ktruk* (Alishan #62, #1443, #2117, #2328, #2520, #2519); *Atropa* (Belladonna), Arm. *sngoyratak*, (Alishan, #2782); *Hyoscyamus niger* L. (Henbane), Arm. *aghuashbank*, *aghueshbank* (Alishan, #59); *Valeriana officinalis* L. (Valerian) Arm. *katui deggh*, *katui xot* (Alishan #52, #476, #1350, #3083); *Datura Stramonium* (Thornapple), Arm. *archengoyz*, *archu engoyz* (Alishan #230). This is a partial list only.

There are also a few which have not been fully identified such as *horot-morot* which may be one or two plants (tuberous hyacinth) and/or poppy (See Russell, pp. 380-383); and the mysterious *hamaspiwr*.

In addition to plant hallucinogens, we believe that the populations of the Caucasus were also familiar with the psychoactive properties of toad-skin, an element found in almost all European witches' brews. As a protection against insects, the common European toad *Bufo* exudes the chemical bufotenine, a very potent hallucinogen. Some Caucasian folktales describe a magical being, (a frog) whose power is in his skin. To force this creature into human form permanently, the frog skin must be taken and burned. (M. Wardrop, *Georgian Folktales* (London, 1894) pp. 15-21.

17. See, for example Stella Vardanian, "Medicine in Armenia," pp. 185-198, in *The Diffusion of Greco-Roman Medicine into the Middle East and the Caucasus*, J.A.C. Greppin et al. ed. (Delmar, N.Y., 1999).

18. On the etymology of Arm. *sunk*, see HAOMA, pp. 121 ff. *Sunk*, the generic Armenian term for "mushroom" originally may have designated *Amanita muscaria* specifically.

19. Eznik, Book I. 68.

20. Eznik, Book III. 16.

21. According to C. Hobbs, *Medicinal Mushrooms* (Loveland, CO, 1996) pp. 10-15, the *agaricum* of Pliny is to be identified with *Fomitopsis officinalis*.

22. Alishan, pp. 576-577, under #2804-5 *sunk/sungn*.

23. *The Lawcode [Datastanagirk'] of Mxit'ar Gosh*, R. W. Thomson, trans. (Atlanta, 2000) chapter 31, p. 146. Gosh (d.1213) also authored a book of fables, several of which deal with plants and trees. See in particular numbers 15, 16, 19, 25, 26, 27, 29, 30, 31, 33, 45, 47, 48, 49, 51, 52, 53, 64, 61. *The Fables of Mkhitar Gosh*, R. Bedrosian, trans. (New York, 1987). A more literal translation is available at Internet Archive: [Mkhitar Gosh's Fables](#).

24. Russell, pp. 32-33, 52, 375, 387-388. Whether poplar is a host to *Amanita muscaria* is unclear, though it belongs to the willow family, *Salicaceae*, as does the aspen, a known host. Karst, p. 46-47 connects the poplar cult with the Eleusinian mysteries. The illustration of mushrooms in *Haykakan sovetakan hanragitaran*

[*Armenian Soviet Encyclopedia*], vol. 10 (Erevan, 1984) before p. 417 shows one, (#3) called *kaghamaxasunk* ("poplar/aspen" mushroom) which is clearly *not Amanita*, though it does resemble the hallucinogen *Stropharia cubensis*, as do entries #4 *mamrhasunk* and #5 *yughasunk*. See note 15 above on the psilocybin-containing mushrooms. In any case, the poplar was also prized for its polyphores, mentioned by Pliny (*Natural History*, XVI. 85; XXIV. 47) for their healing qualities.

The identification of the *saws/sos* tree is disputed. According to the Classical Armenian dictionary of M. Bedrossian, *Nor barhgirk' hay-angliaren*, (Venice, 1879; repr. Beirut, 1973) p. 660, *sos* is the "plane tree" or "white poplar," two trees which are quite different. Since divination was done by the rustling of leaves, the logical choice from a botanical standpoint would be the poplar. The poplar's leaves are alternate, ovate or heart-shaped in outline. Because of their laterally compressed petioles, the leaves tremble in the slightest breeze. The same dictionary does not have an entry under *bardi*, another term used for "poplar," while *kaghamaxi*, p. 320 is also called "poplar." In modern Armenian, *kaghamaxi* is usually translated "aspen."

25. Prayer-trees: Ananikian, p.62. On the *Arewordik'* see Russell, chapter 16, pp. 515-528. *Paulician/T'ondrakets'i/Arewordik'* reverence for known *Amanita muscaria* hosts, may indicate the mushroom's ritual usage among these groups. The 12th-century Nerses' indictment of them included:

[The demon of passion]...also taught them to make noise before trees on earth, (saying) "You are my father," and to rock (saying) "You gave birth to us," and he commanded them to sacrifice on mountain and hills, beneath oaks and poplars/aspens (*i nerk'oy kaghneac' ew kaghamaxeac'*) and leafy trees. Russell, p. 538.

Earlier in the same letter he accused them of drug use:

In a fitting way, then, command also the women to be far from witchcraft, administering of potions and all manner of demonic cult, for whosoever practices witchcraft, he is one who worships and bows down to demons. Russell, p. 536.

Nerses' words strongly suggest that more was involved here than simple reverence for wood:

...Nor must they revere the aspen, any more than the willow, the poplar or other trees, nor should they think the wood of Christ's cross was aspen-wood; this is a lie and Satanic deceit, that has led them into confusion and has turned them from God. *For this tree called the aspen was for them an object of worship in the times of idolatry, and demons used to settle in it and accept the obeisance of men. And although this confusion was by the grace of God rooted out from amongst other peoples living on the earth, amongst you Satan hid and cherished it as a leaven of evil, and if you wish to come to the truth of Christ, then pull out the wicked custom from amongst you.* Russell, p. 535.

26. On archaeology as a tool for ethnobotanical studies, see William A. Emboden, Jr., "[Art and Artifact as Ethnobotanical Tools in the Ancient Near East with Emphasis on Psychoactive Plants](#)," pp. 93-107, in *Ethnobotany, Evolution of a Discipline*.

Greek mythology provides some information on eastern Asia Minor and the Caucasus in the 8th century B.C. The myths concerning Aia are early reflections of the enduring image of the area as a place of magic/medicine/drugs:

... the strong and independent royal women of Aia are shown as practitioners of magic/medicine. Both Medea and her aunt Circe have extensive knowledge of the local pharmacopoeia, which is

accurately reflected in these myths (29). Thus, it is due to a magic ointment which Medea gives to Jason that he is able to yoke the bulls, plow the field, and defeat the men sown from dragon's teeth (30). After this battle, it is due to another of Medea's drugs that the sleepless dragon guarding the Golden Fleece is lulled to sleep and Jason is able to take the fleece (31). Medea, during her subsequent adventures in Greece, continued to concoct poisons and medicines (32). [10] Circe, Medea's aunt, is the sorceress *par excellence* in Greek mythology. She transformed half of Odysseus' men into pigs by putting a drug into their wine, and later restored the crew to human forms using a different drug. Still another Aiakid, Pasiphae, sister of Aeetes and Circe, exhibited similar talents (33). R. Bedrosian, "Eastern Asia Minor and the Caucasus in Ancient Mythologies," (1993) [pages 9-10](#).

This reputation was based on the rich flora and fauna of the area. The naturalist V. Hehn, in *Cultivated Plants and Domesticated Animals in their Migration from Asia to Europe* (Amsterdam, 1976; originally published in 1885), suggested that both the vine and cannabis, among a number of other plants, may have originated in or close to the area of our interest. The vine: "south of the Caspian sea or in Colchis on the Phasis, in the countries lying between the Caucasus, Ararat, and Taurus (p. 73). Cannabis: "...originally came from Bactria and Sogdiana, the regions of the Aral and Caspian Seas, where it is said to grow luxuriantly in a wild state to this day...From the Pontus and Thrace this excellent material for rope was exported to the Greeks" (p. 151). Hehn calls Pontus "the fatherland of poisons and antidotes" (p.311).

Several early historical accounts provide additional, fascinating information on entheogens native to the area. In 401 B.C. the Greek general Xenophon's soldiers had an unexpected (and probably unwanted) experience with a narcotic honey, in the area south of Trapezus (Trebizond):

After accomplishing the ascent the Greeks took up quarters in numerous villages, which contained provisions in abundance. Now for the most part there was nothing here which they really found strange; but the swarms of bees in the neighbourhood were numerous, and the soldiers who ate of the honey all went off their heads, and suffered from vomiting and diarrhoea, and not one of them could stand up, but those who had eaten a little were like people exceedingly drunk, while those who had eaten a great deal seemed like crazy, or even, in some cases, dying men. So they lay there in great numbers as though the army had suffered a defeat, and great despondency prevailed. On the next day, however, no one had died, and at approximately the same hour as they had eaten the honey they began to come to their senses; and on the third or fourth day they got up, as if from a drugging. Xenophon, *Anabasis*, Carleton L. Brownson, trans., (London, 1922/1968) IV. viii.20-21, [LCL, p. 340/341].

In the view of Hehn (p. 311), this honey was produced from the blossoms of the oleander/rhododendron bush (Arm. *dap'nevard*, *nzruvard*, *chp'ni*). Speaking about the same area, the geographer Strabo (B.C. 64- A.D. 24), himself from Pontus, noted that resident tribes used the honey as a weapon against Roman troops, Strabo, *Geography*, 12.3. 18-19 [H. L. Jones, trans., (London, 1928; 1988) LCL v. p. 400/401].

Plutarch, in *Isis and Osiris*, 46 described another entheogen found in Cappadocia and Armenia, the famous *moly* plant:

They pound up in a mortar a certain plant called *omomi*, at the same time invoking Hades and Darkness; then they mix it with the blood of a wolf that has been sacrificed, and carry it out and cast it in a place where the sun never shines. Plutarch *Moralia*, volume V, F. C. Babbitt, trans., (London, 1936; 1999) LCL v. p. 113.

Flattery, in *HAOMA*, p. 36, considers this *Peganum harmala*, and relates it to the magical plant *moly* given by Hermes to Odysseus (Odyssey I. 304-306) as an antidote to Circe's pottage. Schwartz, *ibid*, p. 146, relates the word to Armenian *mol*, *molor*, *moli*, "raving, mad, insane." However, these are not the properties of *haoma* intoxication. Furthermore, the concoction is said to have been "thrown away," like spawn, rather than ingested.

Pliny the Elder (A.D. 23-79) has preserved remarkable information about the ethnobotanical interests of the famous king Mithradates VI (reigned B.C. 120-63), who was from Sinope and was the father-in-law of Armenia's king Tigranes the Great (reigned B.C. 96-56/55):

5. Mithridates, the greatest king of his time, defeated by Pompey the Great, was, as we know from direct evidence and by report, a more attentive researcher of life than any man born before him.

6. Alone and unaided, he devised a plan to drink poison every day after first taking remedies, in order that by accustoming himself to the poison he might become immune to it. He was the first to discover the different antidotes, one of which bears his name. Mithridates also mixed the blood of Pontic ducks with these antidotes because they lived on poison. Still extant are treatises addressed to him, written by the famous doctor Asclepiades, who when invited to come from Rome sent written instructions instead. It is well attested that Mithridates was the only person to speak twenty-two languages, and that he never addressed any of his subject peoples through an interpreter during all fifty-six years of his reign.

7. Mithridates, with his breadth of intellect, was especially interested in medicine and amassed detailed knowledge from all his subjects, who covered a substantial part of the world. He left among his private possessions a bookcase of these treatises, together with specimens and descriptions of their individual properties. Pompey the Great, when all the royal booty had fallen into his hands, ordered his freedman Lenaeus, a man of learning, to translate these works into Latin. As a result, this great victory was of no less benefit to everyday life than to the state. Pliny the Elder, *Natural History, a Selection*, J. F. Healy trans. (New York, 1991) XXV. 5-7. p. 240.

27. Carl A. P. Ruck, "Prometheus as Shade-Foot and the Theft of Fire," [pp. 169 ff.](#) in *Persephone's Quest*.

Prometheus himself, in some traditions, was apparently the magical plant. A miraculous herb, parasitic on a tree and in color like the crocus, was said to grow from the blood of Prometheus in his torment. Medea picked it to annoy Jason (or Iason, in Greek, apparently so named for this anointing with the drug that will protect him from the fire-breathing bulls guarding the tree with the golden fleece); when the plant was thus harvested, Prometheus himself groaned, according to the way that Apollonius Rhodius told the story, for the plant is said to grow from a double stem. In picking the Promethean herb, Medea is also in contact with the suffering Titan bound to his mountain, for which reason the root of the plant when it is plucked was said to resemble the flesh of a corpse that has just been cut (*Argonautica* 3.845 ff.), *ibid.*, [p. 172.](#)

28. Ananikian, p. 46.

29. This ancient legend appears in the relatively late (8th century ?) political novel of Movses Xorenats'i, I.31 *History of the Armenians*. The classical Armenian is a gem of onomatopoeia:

Erkner erkin, erkner erkir,
Erkner ew dzovn dzirani.
Erkn i dzovun uner ew zkarmrikn eghegnik.

End eghegan p'ogh dzux elaner,
 End eghegan p'ogh bots' elaner,
 Ew i bots'oyñ vazer xarteash patanekik.
 Na hur her uner.
 Apa t'e bots' uner morus,
 Ew ach'kunk'n ein aregakunk'.

30. Russell p. 205 ff.

31. *Ibid.*

32. *Ibid.*, pp. 209-210.

33. Ananikian, p. 81.

34. Among them: the Hurrian myth of Ullikummi, the pillar who grows up through a lake and is then decapitated by the god Ea; the myth of Marsyas, who is flayed on a tree; and the myth of Attis who castrates himself and throws his testicles under a pine tree, a common *Amanita muscaria* host.

35. A. J. Carnoy, "Iranian Mythology," in *Mythology of All Races*, vol. VI, p. 289.

36. Plutarch, *De fluviis*, 23 par. 4.

37. W. S. Shelley, *The Elixir: an Alchemical Study of the Ergot Mushrooms*, pp. 83-103.

38. On the numerous storm gods of Armenia, see M. Abeghyan, *Erker* vol. 7 (Erevan, 1975), pp. 65-78.

39. *The Geography of Strabo*, H. L. Jones, trans. (London, 1928;1988) (LCL, vol. V, p. 331) 11. 14. 9.

40. Athenaeus, *The Deipnosophists*, C. B. Gulick, trans. (LCL, vol. IV, p. 469) x, 434. Ananikian, p. 34, suggests that it was *haoma*-intoxication. HAOMA, p. 98:

Among the situations where *sauma* seems most likely to have been used was at the inauguration of pre-Islamic Iranian rulers. This is indicated by King Wishtasp's consumption of "*hom* and *mang*" at his "initiation", which is still commemorated by Zoroastrians at the New Year...A reflection of the initiation of kings with *sauma* may be preserved in Plutarch's *Life of Artaxerxes* III. 1-3: "A little while after the death of Darius [II], the new king made an expedition to Pasargadae that he might receive the royal initiation at the hands of the Persian priests. Here there is a sanctuary to a warlike goddess whom one might conjecture to be Athena. Into this sanctuary the candidate for initiation must pass, and after laying aside his own proper robe must put on that which Cyrus the Elder used to wear before he became king; then he must eat a cake of figs, chew some turpentine-wood, and drink a cup of sour milk. Whatever else is done besides this is unknown to outsiders." Zoroaster also put on a garment when he came up from the *hom* liquid as, it seems, did his father Porushasp when he approached the *hom* and as also did Arda Wiraz. This suggests that a change of clothes may have been a regular feature of *sauma*-drinking in the initiation of Iranian rulers.

41. Pliny the Elder, *Natural History, a Selection*, J. F. Healy trans. (New York, 1991) XXX.17, p.271. Russell, p. 268 disputes this.

42. *David of Sasun*, Artin K. Shalian, trans. (Athens, Ohio, 1964) p. 5 n. 3. Hereafter DS. On the derivation of Dzovinar see Abeghian, *Erker* vol. 7 (Erevan, 1975) pp. 70-72.

43. DS, "sea-born" *dzovayin*: Sanasar and Baghdasar, Battle against the Khalif of Baghdad, 7. p. 21, 47; "fiery beings" (*hregghen*): 15. p. 44.
44. DS, I. 10. p. 29.
45. DS, I. 15. p. 45.
46. DS, I. 15. p. 46.
47. DS, I. 15. p. 47.
48. DS, I. 15. pp. 48-49.
49. DS, Sanasar and Baghdasar, The Marriages of Sanasar and Baghdasar, 5. pp. 77-78.
50. DS, 6. p. 81.
51. DS, 6. p. 84.
52. DS, 9. pp. 94-97.
53. DS, p. 18. *Dzurh* is sometimes translated "foolhardy" or "daredevil," and the epic itself is sometimes called "The Daredevils/Fools of Sasun." "The Bent Ones of Sasun" is more accurate, though, perhaps, less dignified for the title of a "national epic."
54. DS, II. Medz Mher, Medz Mher administers Sassoun, 4. p. 114.
55. DS, *ibid.*, pp. 114-115.
56. DS, II. 12. p. 129.
57. DS, II. Medz Mher's fight against Msrah Melik, 11. p. 146-148. After death, his tomb emitted a strange red-green light III. David's fight against Msrah Melik (II) 5. p. 223.
58. DS, III. David's fight, I. 22. p. 182.
59. DS, David the shepherd, 1. p. 185, 187.
60. DS, *ibid.*, p. 188.
61. DS, David's fight II. 8., p. 200.
62. DS, David's fight II. 6-8, pp. 196-99.
63. DS, David's fight II. 13., p. 234.
64. DS, The duel between David and Melik, 11., p. 268. David was killed by a poisoned arrow, shot by his own daughter, III. David and Khantout, 4., p. 334.
65. DS, IV. Pokr Mher avenges the death of David, 2., p. 343.
66. DS, IV. Marriage of Pokr Mher, and his end, 2., pp. 357-58.

67. DS, *ibid.*, p. 360.

68. DS, *ibid.*, 4., pp. 366-367.

69. DS, *ibid.*, pp. 368-369.

70. Russell, p. 273.

71. Russell, pp. 377-380; Ananikian, p. 30.

72. Ananikian, p. 46; On the diffusionists, see the Introduction to R. Bedrosian, "Eastern Asia Minor and the Caucasus in Ancient Mythologies" (1993), [diffusionists](#), and [notes 10, 11](#).

73. A medieval Armenian letter describes an interesting reference to this in an account of the Apostle Bartholomew's activities at a site originally sacred to the goddess Anahit, called "Rock of the Blacksmiths":

Many *dews* [demons] lived in that Rock and seduced the men of that place, giving [them] there potions of passion for the fulfillment of the corruption of their passions. They made blows of the hammer, terrors by dread wonders. The men of the country became learned in these and lingered by the crucible, taking from the non-gods talismans dripping with the corruption for seduction to the passions, like the talismans of Cyprian for the seduction of Justine, and they named the place Rock of the Smiths. The Holy Apostle arrived, drove out the smiths—the ministers of evil—and smashed the idols, which were in the name of Anahit. Russell, p. 404.

See also note 25 above.

74. The psychoactive effects of *Amanita muscaria* are experienced both by ingesting the dried caps, and/or by smoking fragments of the dried cap mixed with cannabis, tobacco, or other substances. The caption to a drawing in the manuscript of the famous medieval magical text, "The Book of the Six Thousand," may be describing a case of *Amanita* smoking:

The Ms. contains also a drawing of a tripod from which a box is suspended over a fire, with the caption "What you are to smoke. And this is the shape of the pipe you must suspend"...There follow these instructions: "When you hang this, let it stand there that way, and you stand one or two hours long and ask your wish again, and implore and pray and ask for God's help to accomplish your concern. And when it is morning, pick it up with a pipe and take it to a warm place and keep it there. When night falls, bring it out again and smoke that which you are to smoke beneath the stars, and prayerfully ask your desire, and go and stand singleminded and keep your thoughts on it, singleminded. (If) it was not fulfilled, and morning comes, keep it the same way again and do it every night until the days are done. After that keep it on you. Keep it on you and wash your head with it, and go and ask what you want from that man or great one or king." James R. Russell, "The Book of the Six Thousand" (*Bazmavep*) 1989 1-4 pp. 234-235.

Russell speculates: "The number of days is not specified nor is it clear whether it is incense or some substance such as cannabis (well known in Armenia) that is burnt (or actually inhaled) in the pipe" *ibid.*, p. 235.